RESEARCH, DEVELOPMENT and TECHNOLOGY TRANSFER
QUARTERLY PROGRESS REPORT (QPR)

Wisconsin Department of Transportation (WisDOT)
DT1241 5/2014

INSTRUCTIONS:
Research principal investigators and/or project managers should complete a quarterly progress report (QPR) for each calendar quarter during which the projects are active.

WisDOT Research Program Category	**Report Period** *(enter year and check which quarter)*
☐ Policy Research	Year: 2014
☒ Wisconsin Highway Research Program	☐ Quarter 1 (Jan 1 – Mar 31) ☐ Quarter 3 (Jul 1 – Sep 30)
☐ Other: _____	☐ Quarter 2 (Apr 1 – Jun 30) ☒ Quarter 4 (Oct 1 – Dec 31)

Project Title		WisDOT Project ID
Predicting Scour of Bedrock in Wisconsin		0092-12-07
Principal Investigator Name Hani Titi	Project Oversight Committee Chair Name Dan Reid	Project Start Date (m/d/yyyy) 11/1/2011
(Area Code) Telephone Number 414-229-6893	(Area Code) Telephone Number 608-246-7946	Original End Date (m/d/yyyy) 4/30/2013
Email Address hanititi@uwm.edu	Email Address Daniel.Reid@dot.wi.gov	**Current End Date** (m/d/yyyy) 10/30/2015

Project Schedule Status *(check one)*
☐ On Schedule ☒ On Revised Schedule ☐ Ahead of Schedule ☐ Behind Schedule

Project Budget Status

Total Project Budget	Expenditures Current Quarter	Total Expenditures	% Funds Expended	% Work Completed
$94,989.00	$14,474.00	$42,300.00	44%	55%

Project Description
The objective of the research is to assess the ability of the newly developed NCHRP 24-29 to characterize the scour for various types of Wisconsin bedrock at selected structures throughout the state. The study will evaluate the need to refine the test procedures and establish a range of typical values of the test parameters for Wisconsin bedrock. The research will also compare the new method to current practice and communicate the potential benefits that can be realized through WisDOT implementation.
The proposed study described hereinafter will directly follow the objectives specified in the RFP from WHRP:

1. We will collect geologic and hydrologic data from selected sites in Wisconsin where bridges are founded on bedrock.
2. We will conduct field and laboratory test to establish parameters that characterize the relationships between the bedrock erosion rate and the hydraulic loading, following methods developed for the NCHRP Project 24-29.
3. We will refine the test procedure and establish models that include a range of parameters specific for Wisconsin bedrock. We will apply the new models to more accurately predict rock scour at Wisconsin bridges.
4. We will also compare the new model to current practice and communicate the potential benefits that can be realized through WisDOT implementation. Final results will be incorporated into the current WisDOT Bridge Manual with additional procedures for bridge scour analysis.

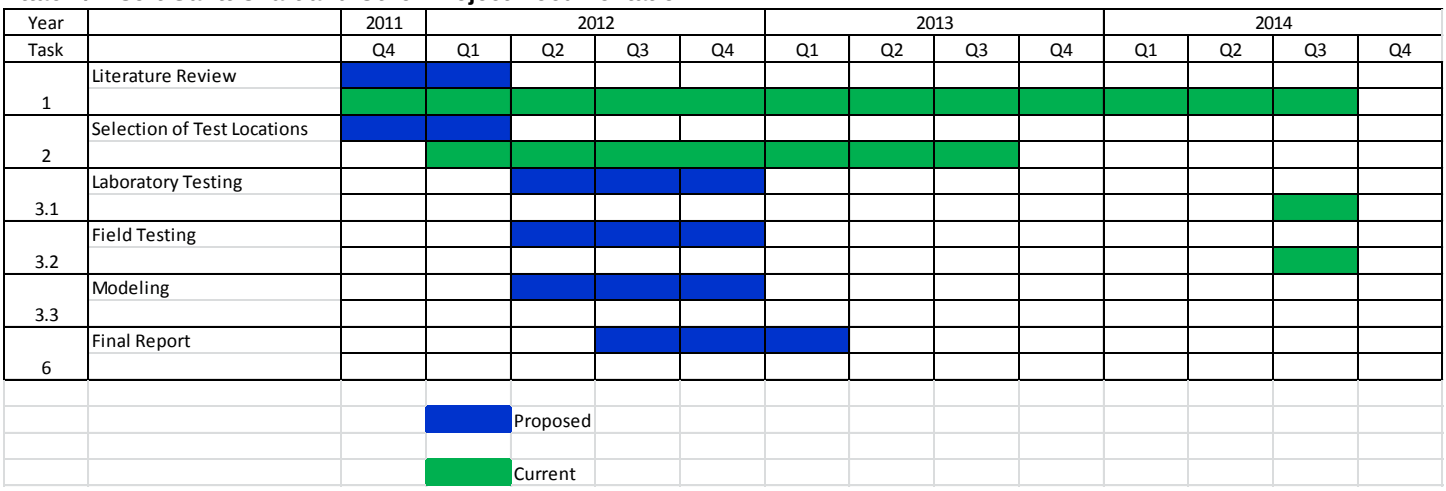
Progress This Quarter *(includes meetings, work plan status, contract status, significant progress, etc.)*
1. Continued literature search and review of new information on rock scour.
2. Continued field work with WisDOT drilling crew at the STH13 Bridge on Wisconsin River in Wisconsin Dells.

Anticipated Work Next Quarter
1. Obtain rock samples from Red Cedar River Bridge in Eau Clair.
2. Work with the POC to identify and perform work at project sites.
3. Continue participate in the drilling and obtaining rock samples from selected project sites.
4. Continue acquiring and testing rock samples.
5. Continue laboratory testing.

Circumstances Affecting Project or Budget

None

Attach / Insert Gantt Chart and Other Project Documentation



*(*enter text)*

For WisDOT Use Only	
Staff Receiving QPR J. Walejko	Date Received (m/d/yyyy) 1/9/2015
Staff Approving QPR Dan Reid	Date Approved (m/d/yyyy) 2/2/2015